5-2019

Depression Follow-Up Program in an Outpatient Family Practice Clinic

Kathy Mayers

Depression Follow-Up Program in an Outpatient Family Practice Clinic

Kathy Mayers, BSN, RN, DNP-S

University of Portland

NRS 691A: DNP Scholarly Project II

Depression Follow-Up Program in an Outpatient Family Practice Clinic

Depression is a common mental health issue affecting adults (National Institute of Mental Health, 2017). This issue is a concern in family practice because primary care providers (PCPs) regularly treat patients with depression (Boudreau, 2002). Comprehensive treatment for depression, including timely and consistent follow-up care, increases the rate of remission and reduces the rate of relapse and suicide (The MacArthur Foundation, 2009).

Clinical Problem

The Centers for Disease Control (CDC) reports that 8.1% of adults in the U.S. suffer from depression (2018). Of this group, two thirds had episodes of depression that caused severe impairment in their ability to function at work, at home, and socially (Center for Behavioral Health Statistics and Quality, 2014). Patients with depression outnumbered those with coronary heart disease and new cancer diagnoses (American Heart Association, 2017; American Cancer Society, 2014).

Depression not only impacts mood, it impacts general health as well. Depression often occurs alongside other chronic diseases and is up to three times more common in patients who have other physical illnesses (Kok et al., 2013). Also, individuals with mental illness also have increased risks of conditions such as cardiovascular disease, high blood pressure, diabetes, arthritis, digestive disorders, chronic bronchitis, emphysema, and asthma (IOM, 2006).

The tie between depression and other health issues is a concern because PCPs are often responsible for mental health treatment. More than 50% of depressed patients are managed entirely by their PCP (Boudreau et al., 2002). Inadequate management of depression in the primary care setting can result in poor patient outcomes (Greene, et al., 2017; Yeung, et al., 2012). Guidelines for depression care emphasize the importance of effective clinical management

in increasing patients' medication compliance, monitoring treatment effectiveness and identifying and managing side effects (Birnbaum et al., 2010).

Background and Significance

Several prominent organizations who provide authoritative advice on health recommend follow-up for patients with depression as best practice. The Agency for Healthcare Research and Quality (2016) recommends that clinicians "establish and maintain follow-up" with patients who are diagnosed with depression: this guideline has high quality of evidence and the strength of recommendation is strong. The Institute of Medicine (2012) advises increasing frequency of follow-up for patients with depression. The Robert Wood Johnson Foundation cites the need for a systematic approach to depression follow-up (Parker, 2010). Finally, the MacArthur Foundation (2009) suggests timing follow-up one to two weeks after a diagnosis of depression, noting that earlier contact may improve compliance.

Purpose of the Project

The purpose of this project was to provide structured, timely follow-up for patients who are newly diagnosed with depression in order to enhance the quality and consistency of care. The project site, an outpatient family practice clinic in Portland Oregon, had no current policy or structure in place to ensure follow-up for patients initially diagnosed with depression. The intent was to reach out to patients in order to ascertain whether they were having difficulties with treatment, provide reassurance, and offer additional supports when needed. Providers would be alerted to any issues with medications, access to behavioral health, or suicidal ideation.

Theoretical Framework for the Practice Change

Replicating Effective Programs (REP) is a framework initially used by the CDC in 1996 to promote HIV behavioral interventions in community-based settings (Kilbourne, Neumann,

Pincus, Bauer, & Stall, 2007). The framework combines action anthropology, where a neutral party bridges the gap between two cultures, health promotion, and Social Learning Theory. Primary features include "packaging" an intervention for a specific setting, refining it frequently, and working with all affected groups (Kilbourne, et al., 2007).

The REP emphasizes flexibility and group dynamics, both important to this project. The practice change was tailored to match the needs of clinic staff and the patient population. Many different people were involved, including RNs, providers, pharmacists, care management, and patients, making communication and teamwork important. Given the number of people involved, the intervention needed refinement throughout the project. The framework provided a structured way to address the issue of depression follow up.

Evidence

A review of the literature was done to determine best available evidence for depression treatment and follow-up. The PICOT (population, intervention, comparison, outcome, time) was formulated as: "In primary care patients newly diagnosed with depression, how does the implementation of a follow-up protocol compared to lack of standardized follow-up influence quality of care through timely and consistent follow-up care for depression?" This review included research that was peer-reviewed and published within the last ten years. Research pointed to the importance of outreach to patients diagnosed with depression (Boudreau et al., 2002; Greene, et al., 2017; Yeung, et al., 2012). This evidence supports phone contact by RNs or pharmacists within two to four weeks of diagnosis including patient self-report, patient education, reassurance, medication adherence and side effects, suicide screening, and scheduling appointments with a PCP (Boudreau, et al., 2002; Greene, et al., 2017; Yeung, et al., 2012) (see Appendices A and B). Patients with depression who are monitored closely have decreased

depression symptoms, better response to treatment, and higher remission rates (The MacArthur Foundation, 2009). The innovation, based on the evidence identified, was a follow-up protocol for patients newly diagnosed with depression.

Implementation

An initial chart review included fifty clinic patients diagnosed with depression during an office visit with their PCP. The intent of the review was to form a baseline assessment of depression care at the clinic for later comparison after project completion. This review noted length of time from initial office visit to subsequent patient contact, whether patients returned for follow-up with their PCP, and whether patients contacted the office to discuss depression. The Care Management team developed a Depression Registry to ensure a systematic process for identifying patients with depression. Patients were identified through ICD-10 codes for depression and entered into the depression registry for tracking purposes. A charting template accessed through an EPIC "Smartphrase" was created to use during calls (see Appendix C). This "Smartphrase" is an evidence-based combination of elements recommended in three research studies (Boudreau, et al., 2002; Greene, et al., 2017; Yeung, et al., 2012). A workflow was developed to guide the follow-up process (see Appendix D).

Five Triage RNs participated in two one-hour trainings on antidepressants, depression, suicidal patients, and the follow-up process. They were given a binder with community resources, support groups, self-care tips, and information on antidepressants. After implementation began, RNs contacted patients by phone within two weeks after initial diagnosis to provide reassurance, determine any issues with medication or counseling referral, and identify need for additional supports. A timeline is available delineating these steps (see Appendix E).

Evaluation plan

During the 12-week implementation period the nursing supervisor reviewed all follow-up calls made each week. This review included the total number of calls made to patients newly diagnosed with depression, timeliness of calls (as measured by the number of days from diagnosis to patient contact), adherence to protocol (as measured by whether charting in the EHR followed the workflow), and whether follow-up visits were scheduled with the patient's PCP. After implementation was complete, descriptive analysis was used to determine average days to first contact after diagnosis and percentage of patients scheduled for follow-up visits with their providers. Providers and RNs were asked to give general feedback on the project during two monthly meetings. Finally, another chart review was completed on all patients who received follow-up calls to determine whether protocol was followed and the number and percentage of patients contacted.

Ethical Considerations

The main ethical consideration for this project was informed consent. Patients were not aware that they would be receiving a follow-up call from nursing staff after their diagnosis. This was due to problems determining which patients qualified for outreach calls. The project focused on patients newly diagnosed with depression versus those with recurrent depression. It was often difficult to discern whether a patient had a history of depression without close review of their chart after an office visit. None of the patients contacted expressed frustration or discomfort with the calls, but this is something that could be addressed if the protocol is continued. The project received IRB approval.

Results

Over the course of ten weeks, 17 patients with new depression diagnoses were identified. Triage RNs contacted all 17 patients for follow-up. The average length of time until patient

contact was reduced from 34 days (SD = 10.4) to 15.9 days (SD = 1.9). RNs followed the new protocol 76% of the time. One hundred percent of follow-up calls resulted in the scheduling of an appointment with the patient's PCP.

Anecdotally, providers had a positive response overall to the follow-up call program. The group was asked to give general feedback at two monthly meetings. At these meetings, providers reported feeling they were able to give better care with greater patient follow up. Of note, 47% of patients contacted had issues with their treatment such as medication side effects or difficulty in scheduling with a counselor. Follow-up calls were routed to PCPs who were then alerted to these issues. Not all feedback was positive: in a private conversation, one provider noted the new Smartphrase was long and difficult to read.

Triage RNs also seemed to have a positive response to the program. At the start of the program, triage RNs expressed anxiety when dealing with calls with patients who were depressed. In face to face meetings, all five RNs reported feeling more confident interacting with patients with depression after training and experience with multiple follow-up calls. During the final staff meeting after implementation was complete, four RNs reported using the Smartphrase for other mental health related calls, noting it guided questions to ask and had a simpler suicide screen than the one currently used by the clinic.

Summary and Implications

The purpose of this project was to provide structured, timely follow-up for patients newly diagnosed with depression in order to enhance the quality and consistency of care. Before the project, there was no protocol for depression follow-up within the organization. The IOM and the Robert Wood Johnson Foundation both recommend a systematic approach to depression care (IOM, 2012; Parker, 2010). Prior to implementation of the innovation, the average time from

diagnosis to first patient contact was 34 days and there was no scheduled systematic outreach to patients. The MacArthur Foundation (2009) recommends outreach for patients with depression within two weeks after diagnosis. The project reduced the time of first contact from an average of 34 days to an average of 16 days. Prior to implementation, 40% of patients did not return for a visit with their PCP after being diagnosed with depression. The Agency for Healthcare Research and Quality (2016) recommends that clinicians "establish and maintain follow-up" with patients. After implementation, 100% of patients had a follow-up visit scheduled with their PCP.

Lessons Learned

The results of this project are limited due to a small sample size of patients. A longer project period would give time to determine whether patients kept their appointments with PCPs. This would increase the overall number of patients receiving timely follow-up, thereby improving data quality. The project only addressed patients who had a new diagnosis of depression, rather than all patients who might benefit from follow-up. Providers and RNs were asked for feedback in a group setting and were not asked a specific set of questions. An anonymous survey would likely give more accurate responses. Finally, there were issues with identifying patients for follow up because the EHR was unable to filter patients with new depression diagnoses. Improvements in the EHR would allow quicker identification of target patients.

Conclusions

This project suggests that depression follow-up by nursing staff can enhance patient care. The clinic plans to expand the program once staffing permits. The EPIC team is currently working to modify the Smartphrase to a more general form that can be used for other mental health calls. The Smartphrase, along with the mental health binder will be used to support patient care throughout the organization. The RNs currently involved have gained knowledge and

experience that can now be used to support other patients who have mental health needs, adding further support to providers.

Follow-up for patients with depression is a key component of best practice. This project suggests that RNs can be an important part of this process, allowing providers to better treat and care for individuals with depression. One potential barrier is lack of training on depression and other mental illnesses. Staff would benefit from training and experience in dealing with patients who have mental health issues. Finally, having community resources and self-care information available during calls would increase the ability to provide advice and support to depressed patients.

Bibliography

Agency for Healthcare Research and Quality (AHRQ). (2016). Adult depression in primary care. Retrieved from https://www.guideline.gov/summaries/summary/50406

American Cancer Society. (2014). Estimated number of new cancer cases and deaths by sex, US, 2014. Retrieved from https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2014/estimated-number-of-new-cancer-cases-and-deaths-by-sex-us-2014.pdf

American Heart Association. (2017). Heart disease and stroke statistics - 2017 update: A report from the American Heart Association. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/25520374

Birnbaum, H.G., R.C. Kessler, D. Kelley, R. Ben-Hamadi, V.N. Joish, P.E. Greenberg. 2010. Employer burden of mild, moderate, and severe major depressive disorder: Mental health services utilization and costs, and work performance. *Depression and Anxiety; 27*(1) 78–89.

Boudreau, D. M., Capoccia, K. L., Sullivan, S. D., Blough, D. K., Ellsworth, A. J., Clark, D. L., & ... Stevens, N. G. (2002). Collaborative care model to improve outcomes in major depression. *The Annals of Pharmacotherapy, 36*(4), 585-591.

Center for Behavioral Health Statistics and Quality. (2014). *Behavioral health trends in the United States: Results from the 2014 national survey on drug use and health*. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from http://bit.ly/2nbiot7.

Centers for Disease Control (2018). Prevalence of depression among adults aged 20 and over: United States, 2013–2016. *National Center for Health Statistics*. Retrieved from

https://www.cdc.gov/nchs/data/databriefs/db303.pdf

Greene, E., McGuire, J. M., Swift, R., Pace, A., & Ferrera, S. (2017). Effects of an interdisciplinary, collaborative, protocol-driven intervention for depression in a minority, indigent population. *Journal of Cultural Diversity*, *24*(2), 46-53.

Institute of Medicine. (2006). *Improving the quality of health care for mental and substance-use conditions*. Washington, DC: The National Academies of Sciences. ISBN 0-309-10044-5

Institute of Medicine. (2012). *Living well with chronic illness: A call for public health action*. Washington, DC: The National Academies of Sciences. ISBN 978-0-309-22127-6

Kilbourne, A. M., Neumann, M. S., Pincus, H. A., Bauer, M. S., & Stall, R. (2007). Implementing evidence-based interventions in health care: application of the replicating effective programs framework. *Implementation Science*, *2*(1), 42.

Kok, G. D., Bockting, C. H., Burger, H., Hannig, W., Pijnenborg, G. M., Cuijpers, P., & Hollon, S. D. (2013). Double trouble: Does co-morbid chronic somatic illness increase risk for recurrence in depression? A systematic review. Plos ONE, 8(3), doi:10.1371/journal.pone.0057510

The MacArthur Foundation's Initiative on Depression & Primary Care. (2009). Depression management tool kit. Retrieved from https://www.integration.samhsa.gov/clinical-practice/macarthur_depression_toolkit.pdf

National Institute of Mental Health. (2017). Major Depression. Retrieved from https://www.nimh.nih.gov/health/statistics/major-depression.shtml

Parker, S.G. (2010). Depression in primary care: Linking clinical and system strategies. *Robert Wood Johnson Foundation*. Retrieved from https://www.rwjf.org/en/library/research/2010/09/depression-in-primary-care.html

Yeung, A. S., Jing, Y., Brenneman, S. K., Chang, T. E., Baer, L., Hebden, T., & ... Fava, M. (2012). Clinical outcomes in measurement-based treatment (COMET): A trial of depression monitoring and feedback to primary care physicians. *Depression & Anxiety (1091-4269), 29*(10), 865-873.

Zivin, K., Pfeiffer, P., Ilgen, M., Welsh, D., McCarthy, J., Valenstein, M.,…Kales, H. (2012). Years of potential life lost associated with depression among veterans," *Psychiatric Services, 63*(8), 823-826.

Appendix A

Evidence Table

Citation (author, title, year	CF or TF	Design	Sample Setting Characteristics	IV DV and definitions	Metrics	Data analysis (stats)	Results	LOE Strengths Limitations Applicability
Yeung, et al (2012) Clinical outcomes in measurement-based treatment (COMET): A trial of depression monitoring and feedback to primary care physicians	NR	RCT C PHQ9 at 3mos PHQ9 to PCP at 6mos Tx PHQ9 + PI every month w/ feedback to PCP	CBPC in the US, sites alternately assigned n = 915 ≥18, MDDx by PCP, new ADP, no ADP w/in past 120 days 412 in C 503 in Tx	IV monthly PI with feedback to PCP: PHQ9 CFB PG TA DVs REM PHQ9 <5 at 6 mos RESP – PHQ9 ≥50%	PHQ9 at 6mos	Chi-square t-test MLRA at 6mos	REM Tx 46.7% C 42.8% OR: 1.59 (95% CI, 1.07–2.37) RESP Tx 67% C 59.7% OR: 2.02 (95% CI, 1.36–3.02)	Level II Large study group Simple intervention: easier to see what was effective, well-designed study Some socioeconomic differences between groups, PCPs received compensation which could affect enrollment and completion Applicable: follow up with data to PCPs is a feasible intervention
NR= not reported; RCT= randomized controlled trial; C = control; Tx = treatment; PHQ9 = PHQ-9 score; mos = months; PCP = primary care provider; ADP = antidepressant; w = with; PI = phone interview; CFB = % change from baseline; PG = patient goals from depression treatment; TA = Treatment adjustments; MDDx = major depression diagnosis; w/in = within; CBPC = community based primary care MLRA = Multivariate logistic regression analysis; REM = remission; RESP = response; OR = odds ratio; CI = confidence interval								
Boudreau, et al (2002) Collaborative care model to	NR	RCT C	UFMC in Washington n = 74	IV Mph DV	SCL-20	T test	EC 1.83 ± 0.10 UC 1.75 ± 0.10	Level II Well-designed study, looks at

improve outcomes in major depression		Usual care Tx MPh: R DA AM E Ref Appts weeks 1,2,3,4, 6,8,12 Mos 5,7,9,1 1,12	≥18, MDDx, new ADP	Depression severity, quality of life scores 3mos 6mos 9mos 12mos	SCID SF-12 (Phys) SF-12 (Ment)		P = 0.55 EC 21 (53) UC 9 (28) P = 0.04 EC 49.6 ± 1.6 UC 52.6 ± 1.6 P = 0.68 EC 28.0 ± 1.6 UC 29.0 ± 1.7 P = 0.20	quality of life as well as depression scoring Small study, population is higher socioeconomic level than general public Applicable: Follow up with Psychiatrist is a feasible intervention
NR= not reported; RCT= randomized controlled trial; C = control; Tx = treatment, MPh = monitoring by Pharmacist; R = Reassurance; DA = Dose or timing adjustments; AM = adjunct med if needed; E = patient education; Ref = refills; UFMC = university family medical center; MDDx = major depression diagnosis; ADP = antidepressant; mos = months, SCL-20 = Hopkins Symptom Checklist; MOS = Medical Outcomes Study Short Form 12 (SF-12); SCID = Major Depression module from the Structured Clinical Interview for DSM-IV; SF-12 = Medical Outcomes Study Short Form 12; Phys = physical; Ment = mental								
CF = conceptual framework, DV = dependent variable, IV= independent variable, LOE = level of evidence, TF = Theoretical framework								
Greene, et al (2017) Effects of an interdisciplinary, collaborative, protocol-driven intervention for depression in a minority, indigent population	NR	**CCS** C Usual care Tx OV at 1, 2, 3, and 6 mos ADPP PI at 2 weeks: SMG MA MSE PSRI	NPPC in Tennessee n = 49 MDDx new ADP 14 in C 35 in Tx	IV Additional OVs ADPP PI at 2 weeks SMG DV PHQ9	PHQ9 at 4 & 8 weeks, 6 months Patient self-report of improvement at 2 weeks	Power analysis 2-tailed t-test Pearson chi-square Fisher's Exact Test	IV ↓7.06 vs C ($p < 0.001$, 95% CI, 4.3-9.8) IV 80% C 57% ($p=0.152$)	**Level IV** Comprehensive intervention, multicultural population Small study group Fewer men than women **Applicable**: phone follow up similar to other current program, similar sized

		SI						clinic with pharmacist available

NR= not reported; CCS= case controlled study; C = control; Tx = treatment; PHQ9 = PHQ-9 score; mos = months; wks = weeks; PCP = primary care provider; ADPP = antidepressant protocol; w = with; PI = phone interview; MDDx = major depression diagnosis; w/in = within; OV = office visit with PCP; SMG = adherence to self-management goals; MA = medication adherence; MSE = medication side effects; PSRI = patient self-report on improvement; SI = assess suicide risk; NPPC = non-profit primary care; CI = confidence interval

Appendix B

Synthesis table

Study Author	Year	Number of Participants	Study Design	Intervention	Major Finding that Addresses Question
Boudreau, et al.	2002	74	RCT	Monitoring by Pharmacist with reassurance, dose/timing adjustments, adjunct meds, pt education, refills, assistance with costs	Decreased depression symptoms, increased remission, increased general health patient report
Greene, et al.	2017	49	CCS	Increased office visits, phone interview at 2 weeks with self-management goals, med adherence, side effects, patient reported improvement, suicide screen	PHQ-9s lower, patient self-reports of improvement higher
Yeung, et al.	2012	915	RCT	Monthly phone interviews including PHQ-9 scores, change from baseline, patient goals, & treatment adjustments reported to PCPs	Higher remission rates for depression, higher response rates to treatment
RCT = Randomized Controlled Trial ; CCS= case controlled study; PCP = primary care provider					

Appendix C

Charting Template: Depression Follow-up Call

Interview with _patient name_:

How are you doing now?
(*If started on medication*)
Patient started on ___ on ___
Have you been taking the new medication?
Have you had any side effects?
Do you need a refill?
Management strategies discussed:
Referral or information given at office visit for counseling?
Have you been able to make an appointment with the counselor?
Have you made an appointment for follow up by PCP?
(*if no*) Can I help you schedule that appointment?

(*suicide screening*)
Have you wished you were dead or wished you could go to sleep and not wake up?
Have you actually had any thoughts of killing yourself?
(*If yes to #2*)
Have you been thinking about how you might kill yourself?
Have you had these thoughts and had some intention of acting on them?
Have you started to work out or worked out the details of how to kill yourself and do you intend to carry out this plan?
Have you done anything, started to do anything, or prepared to do anything to end your life?

If a patient is an immediate danger to themselves or others, the county crisis line (**503-988-4888**) or **911** needs to be called while the patient is still on the phone

(*if needed, give resources, route **high priority** to Care Management and PCP*)

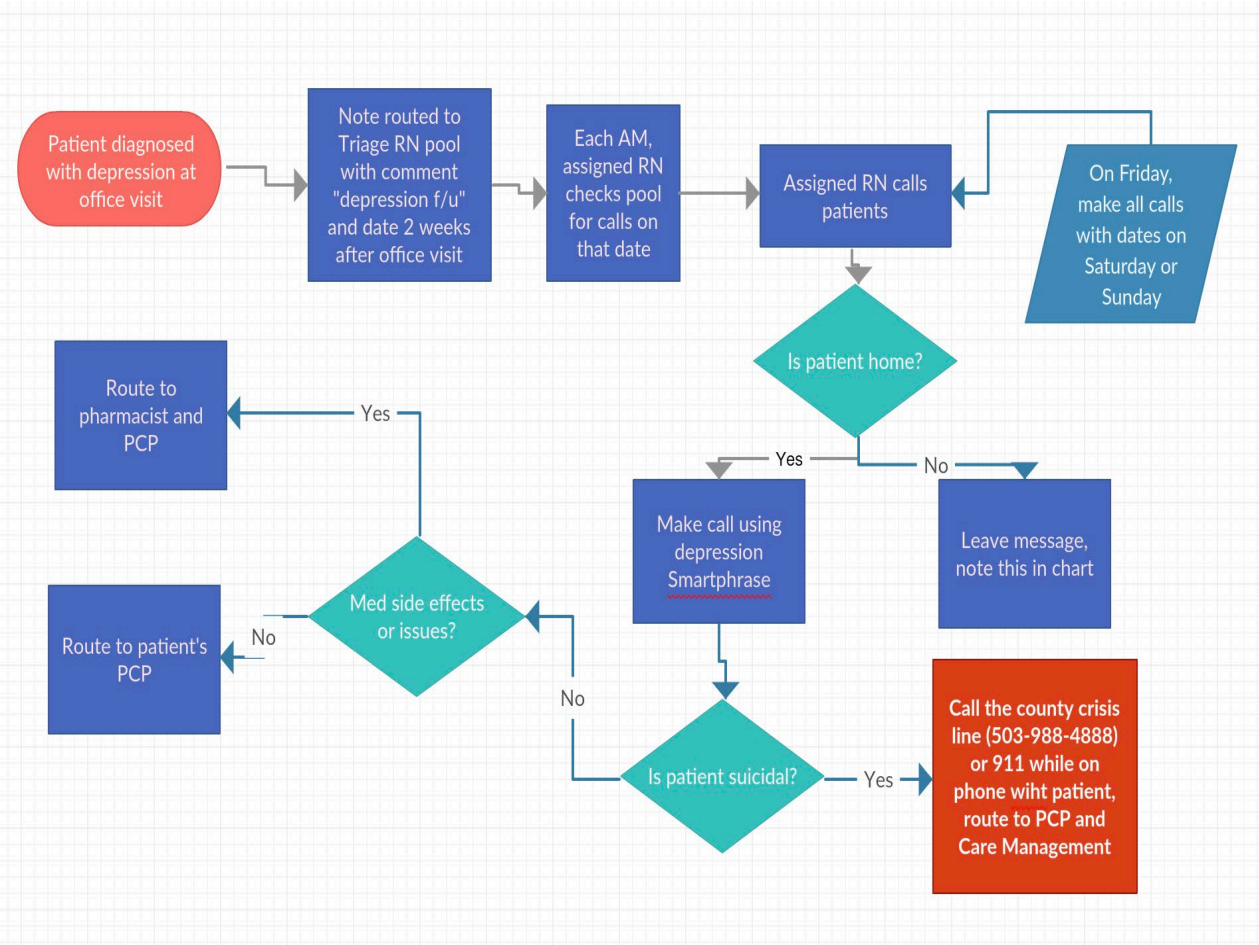
Resources (indicate which one(s) were given to patient:

- Multnomah County Crisis Line 503-988-4888
- Multnomah County: Cascadia Walk-In Clinic: 7 days a week, 7:00am – 10:30pm 4212 SE Division St, Ste 100, Portland
- Multnomah County: Project Respond will come to assess patient, 24 hours per day, 7 days per week. Accessed through crisis line 503-988-4888
- Washington County Crisis Line 503-291-9111
- Clackamas County Crisis Line 503-655-8585
- Clark County WA Crisis Line 360-696-9560
- National Suicide Prevention Lifeline 1-800-273-talk (8255)\

Provider Action:

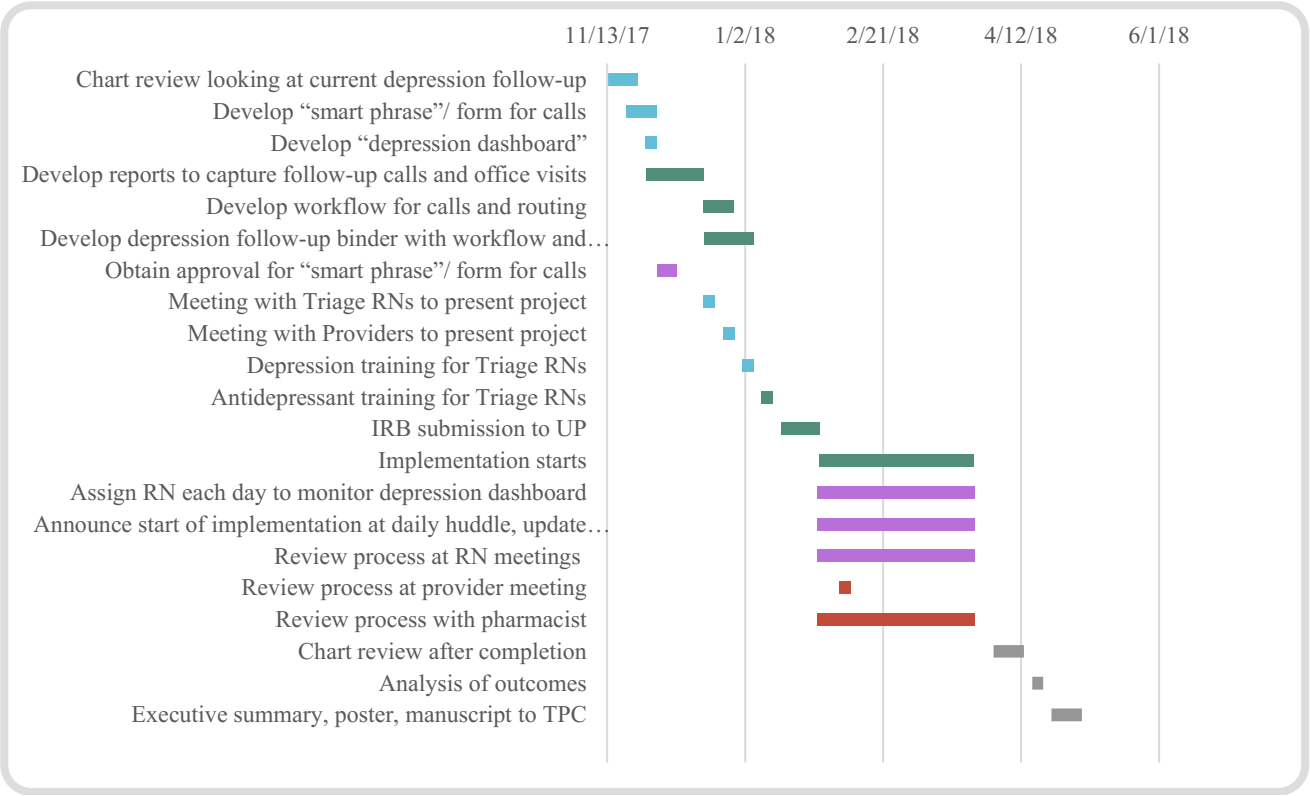
Appendix D

Depression Workflow



Appendix E

Tasks	Responsible Staff	Start	End
Chart review looking at current depression follow-up	DNP Student	11/13/17	11/24/17
Develop “smart phrase”/ form for calls	DNP Student	11/20/17	12/1/17
Develop “depression dashboard”	Information Services	11/27/17	12/1/17
Develop reports to capture follow-up calls and office visits	Information Services	11/27/17	12/18/17
Develop workflow for calls and routing	DNP Student, Nursing Supervisor	12/18/17	12/29/17
Develop depression follow-up binder with workflow and resources	DNP Student	12/18/17	1/5/18
Obtain approval for “smart phrase”/ form for calls	Nursing Supervisor, Care Management Director	12/1/17	12/8/17
Meeting with Triage RNs to present project	DNP Student	12/18/17	12/22/17
Meeting with Providers to present project	DNP Student	12/25/17	12/29/17
Depression training for Triage RNs	Director of Behavioral Health	1/1/18	1/5/18
Antidepressant training for Triage RNs	Pharmacist	1/8/18	1/12/18
IRB submission to UP	DNP Student	1/15/18	1/29/18
Implementation starts		1/29/18	3/26/18
Assign RN each day to monitor depression dashboard	Nursing Supervisor	1/28/18	3/26/18
Announce start of implementation at daily huddle, update weekly	Nursing Supervisor	1/28/18	3/26/18
Review process at RN meetings	DNP Student	1/28/18	3/26/18
Review process at provider meeting	Medical Director	2/5/18	2/9/18
Review process with pharmacist	DNP Student	1/28/18	3/26/18
Chart review after completion	DNP Student	4/2/18	4/13/18
Analysis of outcomes	DNP Student	4/16/18	4/20/18
Executive summary, poster, manuscript to TPC	DNP Student	4/23/18	5/4/18


11/13/17
1/2/18
2/21/18
4/12/18
6/1/18
Chart review looking at current depression follow-up
Develop “smart phrase”/ form for calls
Develop “depression dashboard”
Develop reports to capture follow-up calls and office visits
Develop workflow for calls and routing
Develop depression follow-up binder with workflow and…
Obtain approval for “smart phrase”/ form for calls
Meeting with Triage RNs to present project
Meeting with Providers to present project
Depression training for Triage RNs
Antidepressant training for Triage RNs
IRB submission to UP
Implementation starts
Assign RN each day to monitor depression dashboard
Announce start of implementation at daily huddle, update…
Review process at RN meetings
Review process at provider meeting
Review process with pharmacist
Chart review after completion
Analysis of outcomes
Executive summary, poster, manuscript to TPC